

**(D) REMARKS****In the drawings**

Please find replacement sheet for Fig. 3 and Fig. 4.

**Hu, et al.**

The Examiner rejected claims 1 through 4 as being anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,510,622 to Hu, et al (Hu). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F. 2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987).

Unlike the present invention, Hu actually teaches the practice of physically moving alternate columns (e.g. 18a or 18b) or rows of detector elements in a detector array such that a staggered array of individual detector elements results. As shown in Figs. 4, 3A, 3B, 3C and explained in the accompanying legal description, Hue provides for using each existing detector element, but rearranging said detector elements to either stagger the elements in the Z-axis (Fig. 3A) or in the X-axis (Fig. 3B). Claim 1, as amended, is believed to be patentable over Hu on the ground that it now clearly recites that the present invention combines the signal generated from coupled adjacent detector elements along the Z-axis, the coupled adjacent detector elements being staggered throughout a detector module. As amended, claim 1 is now believed to be in position for allowance. Claims 2-4 have been cancelled.

**Hoffman**

The Examiner rejected claims 5-14 and 21-24 as being anticipated by U.S. Patent Publication 2002/0085108 (the '108 reference) under 35 U.S.C. § 102(b). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or

inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F. 2d 628, 631, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987).

The '108 reference teaches a detector array in which certain detector elements are left "open," as shown in Figs. 5 and 6. As discussed at ¶33 of the '108 reference,

In an embodiment of this invention, if cells on either side of a center cell are disconnected and only a center cell is connected, the charge would diffuse and be collected by the center electrode. Instead of using FETs to connect cells together, this embodiment uses disconnected cells and lets charge distribute itself to cells around the disconnected cells.

The present invention actually takes the signal generated from combined detector elements for each data acquisition channel as opposed to simply taking the signal from a single detector element and ignoring the data received from the disconnected "cells" or detector elements.

As such, claim 5, as amended is now believed to be in position for allowance. Claims 6-8 have been cancelled. Claim 9 has been amended along the same lines as claim 5 and is believed to be in position for allowance along with claims 10, 11 and 15. Claims 12-14 have been cancelled. Claim 21 has also been amended and is now believed to be in position for allowance. Claims 22-24 have been cancelled.

**Hoffman in view of Matson**

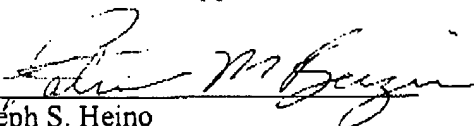
The Examiner rejected claims 15-20 under 35 U.S.C. § 103(a) as being unpatentable over Hoffman in view of Mattson. In order to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation

of success. Finally, the prior art reference or references must teach or suggest all of the claimed limitations. This teaching or suggestion to combine must be found in the prior art, and not based on the applicant's disclosure. *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 15 has been amended and now depends from claim 11, which is believed to be in position for allowance. Claim 16 has been amended along the lines of claim 1 and now more clearly recites combination of detector elements in a detector array throughout a detector module, which, as discussed above, is not taught or suggested by the '108 reference. Claim 17 is believed to be in position for allowance as being dependent from claim 16. Claims 18-20 have been cancelled.

The applicant provided a new, useful and non-obvious improvement to CT systems that improves signal sampling in the Z-direction without substantially affecting the resolution in the X-direction. For his ingenuity, applicant is entitled to the protection of the United States patent laws. Favorable review of the claims is respectfully requested.

Respectfully submitted,  
Neil Clarke et. al. Applicants

By   
Joseph S. Heino

Reg. No. 31,524  
DAVIS & KUELTHAU, s.c.  
111 E. Kilbourn Ave., Ste. 1400  
Milwaukee, WI 53202-1633  
(414) 225-1452

Patrick M. Bergin  
Reg. No. 54,994  
DAVIS & KUELTHAU, s.c.  
111 E. Kilbourn Ave., Ste. 1400  
Milwaukee, WI 53202-1633  
(414) 225-7563